

**Commonwealth of Kentucky  
Division for Air Quality**

**PERMIT APPLICATION SUMMARY FORM**

Completed by: IL-WON SHIN

GENERAL INFORMATION:

Name:	Daramic, LLC
Address:	5525 U.S. HWY 60 East, Owensboro, Kentucky
Date application received:	December 9, 2005
SIC/Source description:	3081, Plastic Battery Separator Manufacturing
Source ID #:	21-059-00006
Source A.I. #:	894
Activity #:	APE20060002 and APE20050003
Permit number:	V-03-004 R2

APPLICATION TYPE/PERMIT ACTIVITY:

<input type="checkbox"/> Initial issuance	<input type="checkbox"/> General permit
<input checked="" type="checkbox"/> Permit modification	<input type="checkbox"/> Conditional major
__Administrative	<input checked="" type="checkbox"/> Title V
__Minor	<input type="checkbox"/> Synthetic minor
<u>x</u> Significant	<input type="checkbox"/> Operating
<input type="checkbox"/> Permit renewal	<input checked="" type="checkbox"/> Construction/operating

COMPLIANCE SUMMARY:

<input type="checkbox"/> Source is out of compliance	<input type="checkbox"/> Compliance schedule included
<input type="checkbox"/> Compliance certification signed	

APPLICABLE REQUIREMENTS LIST:

<input type="checkbox"/> NSR	<input checked="" type="checkbox"/> NSPS	<input checked="" type="checkbox"/> SIP
<input type="checkbox"/> PSD	<input type="checkbox"/> NESHAPS	<input type="checkbox"/> Other
<input type="checkbox"/> Netted out of PSD/NSR	<input type="checkbox"/> Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

- ☐ Acid rain source
- ☐ Source subject to 112(r)
- ☒ Source applied for federally enforceable emissions cap
- ☐ Source provided terms for alternative operating scenarios
- ☐ Source subject to a MACT standard
- ☐ Source requested case-by-case 112(g) or (j) determination
- ☐ Application proposes new control technology
- ☐ Certified by responsible official
- ☐ Diagrams or drawings included
- ☐ Confidential business information (CBI) submitted in application
- ☐ Pollution Prevention Measures
- ☐ Area is non-attainment (list pollutants):

#### EMISSIONS SUMMARY:

Pollutant	2005 Actual (tpy)	Potential (tpy)
PM/PM <sub>10</sub>	22.79 / 21.04	192.91
SO <sub>2</sub>	0.1	0.39
NO <sub>x</sub>	13.27	65.66
CO	10	55.15
VOC	592.57	836.57
Individual HAP > 10 TPY Hexane	241.67	530.29
Source wide HAPs	241.67	530.34

#### SOURCE DESCRIPTION:

Daramic, LLC located at Owensboro, Kentucky, manufactures polyethylene battery separators through five main processes: receiving and handling of bulk materials, mixing of bulk materials, extrusion of the mixture, extraction of oil from the polyethylene web, and finishing by application of fiberglass mat to the polyethylene web and/or slitting/chopping.

Bulk materials are received by railcar, bags, and by drums. Dry materials received by railcar are pneumatically conveyed from the railcar into three main storage silos, one for polyethylene and two for silica. The railcar unloader uses an induced draft fan to move the product from the railcar into a cyclone and baghouse unit to recover the product. These materials are then pneumatically conveyed into the storage silos. Silo 1 is equipped with a baghouse to prevent product from escaping. Silo 2 & 3 share a baghouse.

Daramic uses three boilers to provide both space heat and process heat. Two small boilers (22.3 and 26.8 mmBtu/hr respectively) are used to provide space heat during the 5 cold months of the year. The main boiler (63 mmBtu/hr) is used to provide process heat for Daramic and Owensboro Specialty Polymers (previously WR Grace). All boilers are natural gas fired with the capability of burning number 2 fuel oil as a backup. Operation of these boilers on #2 Fuel Oil is used as a last resort in maintaining production operations.

Recently Daramic purchased the Fibermark, Inc. facility located at the same physical location. This purchase included the Cleaver Brooks 900 hp Boiler. This boiler was previously permitted by Fibermark and operated under Permit # S-99-115. Daramic submitted a construction application for permitting of a 900 hp Boiler and addition of insignificant activities on May 11, 2006.

The boiler has been designated (01)(77)(223) Boiler #4 – Cleaver Brooks 900 hp (37.8 mmBtu/hr). The secondary fuel tank has been designated (11)(78)(224) T-507 Fuel Oil #2 – Boiler Backup. Potential emissions from Boiler #4 are below the prevention of significant deterioration of air quality (PSD) significant increase levels, defined in 401 KAR 51:001.

#### EMISSIONS AND OPERATING CAPS DESCRIPTIONS:

Dispersion modeling (ISCST3 air model) for the Title V permit application has been performed for the solvent containing 65% n-Hexane, which showed its emissions comply with 401 KAR 63:020 requirements.

**OPERATIONAL FLEXIBILITY:**

None